

device comprising at least one light source, a bundle of light-guide optical fibers, and a control unit, wherein each of the optical fibers can be controlled by light and/or light can be coupled to these fibers, independently of one another.

#### REMARKS

No claims have been canceled herein. Claims 4-8, 11-13 and 19 have been amended herein. No new claims have been added herein. Therefore, claims 1-19 are under active consideration.

It is respectfully submitted that the present application is in condition for allowance. Prompt and favorable action is earnestly solicited.

If there are any fees due in connection with the filing of this paper that are not accounted for, the Examiner is authorized to charge the fees to our Deposit Account No. 11-1755. If a fee is

required for an extension of time under 37 C.F.R. 1.136 that is not accounted for already, such an extension of time is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Box PCT, Commissioner for Patents, Washington, D.C. 20231 on July 17, 2002

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## MARKED-UP AMENDED CLAIMS 4-8, 11-13 AND 19

4. (Amended) The device according to [one of the preceding claims] claim 1, further characterized in that luminous diodes and/or optical switches are arranged for the control of the individual optical fibers.

5. (Amended) The device according to [one of the preceding claims] claim 1, further characterized in that the substances to be exposed are introduced directly at the ends of the optical fibers.

6. (Amended) The device according to [one of the preceding claims] claim 1, further characterized in that the substances to be exposed are arranged on a separate support.

7. (Amended) The device according to [one of the preceding claims] claim 1, further characterized in that the substances to be exposed are arranged on a separate support, whereby this support is a DNA chip, a PNA chip or a peptide chip.

8. (Amended) The device according to [one of the preceding claims] claim 1, further characterized in that the device additionally comprises at least one detector.

11. (Amended) The device according to [one of the preceding claims] claim 1, further characterized in that a dynamic mask is provided for the control of the individual optical fibers.

12. (Amended) The device according to [one of the preceding claims] claim 1, further characterized in that a set of static masks is provided for the control of the individual optical fibers.

13. (Amended) The device according to [one of the preceding claims] claim 1, further characterized in that the light source emits a spectrum of wavelengths that bring about the deprotecting of nucleotides, nucleotide analogs and peptide nucleic acid building blocks for the elongation of the chain and for the construction of oligomers, and that between this light source and

the substrate is arranged a bundle of optical fibers, to which light can be selectively coupled each time by targeted control, and that the solid phase on which the oligomer synthesis occurs is positioned precisely and rigidly behind the bundle of optical fibers, and that the solid phase on which oligomer synthesis occurs is arranged in a chamber in which the solutions and/or reagents necessary for the DNA or PNA synthesis can be introduced onto this solid phase by other devices.

19. (Amended) The method according to claim 16, further characterized in that a device [according to claim 1] for the photolithographic exposure of biological substances is used for conducting the method, said device comprising at least one light source, a bundle of light-guide optical fibers, and a control unit, wherein each of the optical fibers can be controlled by light and/or light can be coupled to these fibers, independently of one another.